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(दूसरा पुनरीक्षण)

Indian Standard

DIE STOCK FOR CIRCULAR SCREWING DIES — SPECIFICATION

(Second Revision)

UDC 621·992·3 : 621·9—229·27

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

March 1994 **Price Group 3**

Thread Cutting Taps and Dies Sectional Committee, PE 13

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Thread Cutting Taps and Dies Sectional Committee had been approved by the Production Engineering Division Council.

This standard was first published in 1965 and revised in 1983 in line with the work done at the international level. This second revision is necessitated to bring it in line with revised DIN standard especially in respect of dimensions d_4, d_5, l_1 and l_2. In the title and text of the standard 'Die holder' has been modified as 'Die stock' so as to bring it in line with the terminology agreed to at ISO level. In the preparation of this standard, considerable assistance has been derived from:

> ISO 2568 : 1988 'Hand and machine-operated circular screwing dies and hand operated die stocks' issued by International Organization for Standardization (ISO).
>
> DIN 225 : 1987 'Schneideisenhalter (Die stocks)' issued by Deutsches Institute für Normung (DIN).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off, in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

DIE STOCK FOR CIRCULAR SCREWING DIES — SPECIFICATION

(*Second Revision*)

1 SCOPE

1.1 This standard covers the dimensions and other requirements for die stocks suitable for holding circular screwing dies.

1.2 The correlation of die stocks and circular screwing dies is given in Annex A.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
3403 : 1981	Dimensions for knurls (*first revision*)
7778 : 1975	Method of sampling small tools
12321 : 1988	Circular screwing dies for ISO metric threads
12322 : 1988	Circular screwing dies for taper pipe threads, R series
12323 : 1988	Circular screwing dies for parallel pipe threads, G series
12325 : 1988	Circular screwing dies for ISO metric conduit pipe threads

3 DIMENSIONS

Dimensions for die stocks shall be as given in Table 1.

4 MATERIAL

The material for the die stocks shall be steel or malleable iron having tensile strength not less than 370 MPa (1 MPa = 1 N/mm^2).

5 GENERAL REQUIREMENTS

5.1 Die stocks shall be used with any of the circular screwing dies conforming to IS 12321 : 1988, IS 12322 : 1988, IS 12323 : 1988, and IS 12325 : 1988.

5.2 Body and handles of a die stock may be in one piece or a screwed or butt-welded assembly. For nominal sizes 55 × 16 and above, the assembly shall be butt-welded only.

5.3 Edges on both sides of the bore of the die stock shall be well chamfered.

5.4 Handles shall be in alignment and the outer half of each handle shall be knurled for nominal sizes 30 × 11 and above. The knurles shall conform to Type RGV of IS 3403 : 1981.

5.5 Adjusting screws shall be of slotted pan head type with conical point.

6 DESIGNATION

Die stock may be designated by its nominal size.

Example:

A die stock having nominal size 45 × 18 and conforming to this standard shall be designated as:

Die stock IS 3239 45 × 18

7 WORKMANSHIP AND FINISH

Die stocks shall be free from burrs, seams, cracks and other manufacturing defects. All the surfaces shall be finished smooth except where higher surface finish is required and is accordingly indicated.

8 MARKING

Each die stock shall be legibly and indelibly marked with the designation and manufacturer's name or trade mark.

9 SAMPLING

The sampling and criteria of acceptance shall be in accordance with IS 7778 : 1975.

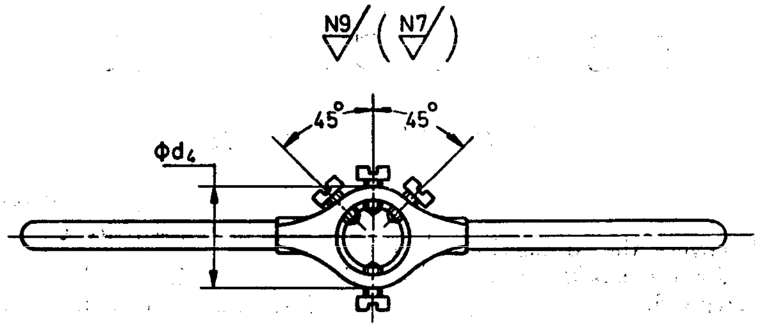
10 PRESERVATION AND PACKING

Each die stock shall be suitably protected against rust and shall be packed in cartons bearing the nominal size, and the name, initials or trademark of the manufacturer.

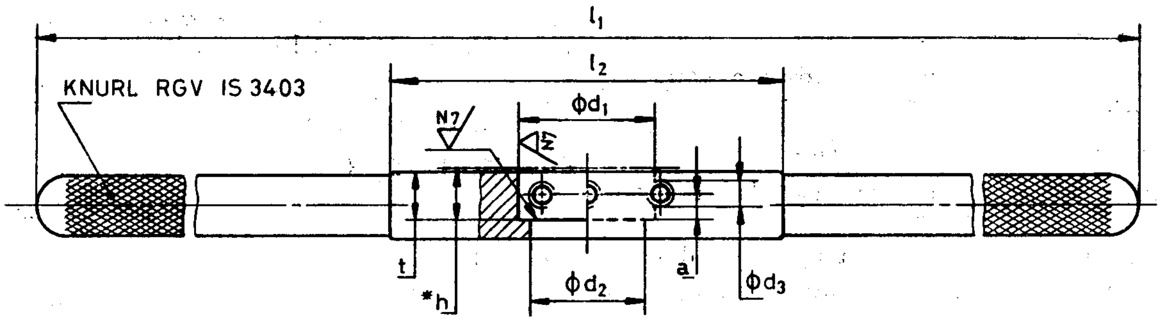
Table 1 Dimensions for Die Stock for Circular Screwing Dies

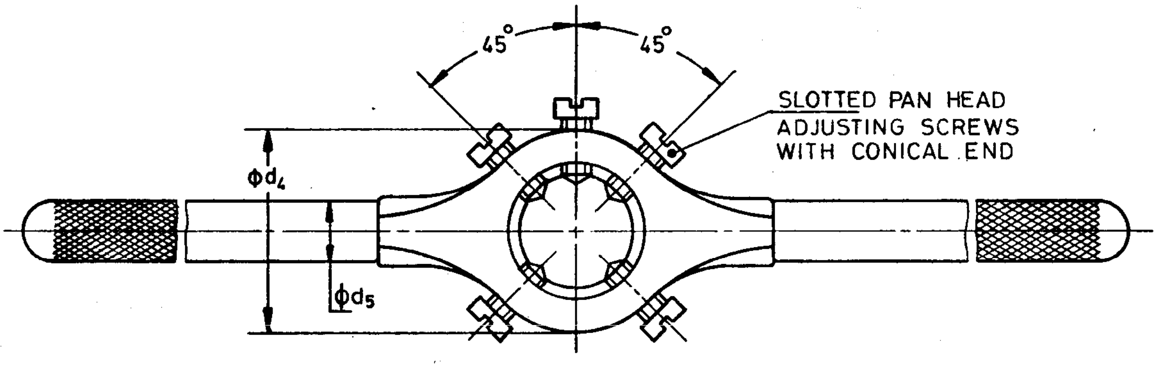
(*Clause* 3)

All dimensions in millimetres.



FOR SIZES Φd1 = 16mm AND 20mm





FOR SIZES Φd1 = 25mm AND ABOVE

Nominal Size of Die Stock	d_1 D10	h*	a $^{0}_{-0\cdot2}$	d_2	d_3 6H	d_4 *Max*	d_5 *Max*	l_1 *Max*	l_2 *Max*	t
16 × 5	16	5	2·4	11	M3	25	6	160	50	4·8
20 × 5	20	5	2·4	15	M4	30	7	200	63	4·8
20 × 7		7	3·4							6·5
25 × 9	25	9	4·4	20	M5	36	8	224	75	8·5
30 × 11	30	11	5·3	25		42	10	280	90	10

Table 1 (*Concluded*)

Nominal Size of Die Stock	d_1 D10	h*	a $^{0}_{-0.2}$	d_3	d_2 6H	d_4 *Max*	d_5 *Max*	l_1 *Max*	l_2 *Max*	t
38 × 10	38	10	4·8	32	M6	52	12	315	106	9
38 × 14		14	6·8							13
45 × 14	45	14	6·8	38	M6	63	14	450	11	13
45 × 18		18	8·8							17
55 × 16	55	16	7·8	48	M8	75	16	560	132	15
55 × 22		22	10·7							20
65 × 1	65	18	8·8	58	M8	85	18	630	150	17
65 × 25		25	12·2							23
75 × 20	75	20	9·7	68	M8	95	20	800	170	18
75 × 30		30	14 7							28
90 × 22	90	22	10·7	82	M8	115	22	00	190	20
90 × 36		36	17·7							34
105 × 22	105	22	10·7	95	M10	140	24	1 000	212	20
105 × 36		36	17·7							34
120 × 22	120	22	10·7	107	M10	145	25	1 250	220	20
120 × 36		36	17·7							34

*h is the depth of the die.

ANNEX A

(*Clause* 1.2)

CORRELATION OF DIE STOCKS AND CIRCULAR SCREWING DIES

Nominal Size of Die Stock	**Circular Screwing Dies**				
	For ISO Metric Threads			For Pipe Threads	
	For Coarse Pitch Threads IS 12321 : 1988	For Fine Pitch Threads IS 12321 : 1988	For Parallel Pipe Threads, G Series IS 12323 : 1988	For Taper Pipe Threads, R Series IS 12322 : 1988	For Conduit Pipe Threads Series IS 12325 : 1988
16 × 5	M1 to M2·5	M1 × 0·2 to M2·5 × 0·35	—	—	—
20 × 5	M3 to M4	M3 × 0·35 to M5·5 × 0·5	—	—	—
20 × 7	M4·5 to M6	M6 × 0·75	—	—	—
25 × 9	M7 to M9	M7 × 0·75 to M9 × 1	$G^1/_{16}$	—	—
30 × 11	M10, M11	M10 × 0·75 to M11 × 1	$G\frac{1}{8}$	$R^1/_{16}$, $R\frac{1}{8}$	—
38 × 10	—	M12 × 1 to M15 × 1·5	$G\frac{1}{4}$	—	—
38 × 14	M12, M14,	—	—	$R\frac{1}{4}$	—
45 × 14	—	M16 × 1 to M20 × 2	$G\frac{3}{8}$, $G\frac{1}{2}$	—	M16, M20
45 × 18	M16 to M20	—	—	$R\frac{3}{8}$	—
55 × 16	—	M22 × 1 to M26 × 1·5	$G\frac{5}{8}$, $G\frac{3}{4}$	—	M25
55 × 22	M22, M24	—	—	$R\frac{1}{2}$, $R\frac{3}{4}$	—
65 × 18	—	M27 × 1 to M36 × 2	$G\frac{7}{8}$, G1	—	M32

Nominal Size of Die Stock	Circular Screwing Dies				
	For ISO Metric Threads			For Pipe Threads	
	For Coarse Pitch Threads IS 12321 : 1988	For Fine Pitch Threads IS 12321 : 1988	For Parallel Pipe Threads, G Series IS 12323 : 1988	For Taper Pipe Threads, R Series IS 12322 : 1988	For Conduit Pipe Threads Series IS 12325 : 1988
65 × 25	M 27 to M 36	M36 × 3	—	R1	—
75 × 20	—	M38 × 1·5 to M39 × 2 M40 × 1·5, M40 × 2 M42 × 1·5, M42 × 2	G1¼	—	—
75 × 30	M 39, M 42	M39 × 3, M40 × 3, M42×3	—	R1¼	M40
90 × 22	—	M45×1·5, M45×2, M48×1·5 M48×2, M50×1·5, M50×2 M52 × 1·5, M52 × 2	G1½	—	—
90 × 36	M 45 to M 52	M45×3, M48×3, M48×4 M50×3, M52×3, M52×4	—	R1½	M50
105 × 22	—	M55 × 1·5, M55 × 2 M56 × 1·5, M56 × 2 M58 × 1·5, M58 × 2 M60 × 1·5, M60 × 2 M62 × 1·5, M62 × 2	G1¾, G2	—	—
105 × 36	M 56, M 60	M55×3, M55×4, M56×3 M56×4, M58×3, M58×4 M60×3, M60×4, M62×3 M62×4	—	R2	M63
120 × 22	—	M64 × 1·5, M64 × 2 M65 × 1·5, M65 × 2 M68 × 1·5, M68 × 2	G2¼	—	—
120 × 36	M 64, M 68	M64×3, M64×4, M65×3 M65×4, M68×3, M68×4	—	—	—

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